CLAIMS:

1. Circuit arrangement for operating a high pressure discharge lamp, equipped with a DC-AC-converter comprising

- input terminals for connection to a supply voltage source for supplying a first DC voltage,
- a first series arrangement of a first and a second switching element coupled between the input terminals,
- a first control circuit, coupled to respective control electrodes of the first and second switching element, for controlling the conductive state of the first and second switching element,
- a load circuit shunting one of the switching elements and comprising a first inductive element and terminals for lamp connection,

characterized in that the circuit arrangement is further equipped with

- a resonant capacitive element coupled between the terminals for lamp connection,
- a second inductive element coupled in series with the resonant capacitive element,
- a third switching element coupled between a terminal of the second inductive element and one of the input terminals, and
- a second control circuit coupled to a control electrode of the third switching element for rendering the third switching element alternatingly conductive and non-conductive with frequency f and thereby generating an AC ignition voltage over the resonant capacitive element.

2. Circuit arrangement as claimed in claim1, wherein the circuit arrangement is further equipped with an auxiliary power supply for supplying a second DC voltage, respective poles of the auxiliary power supply being coupled to respective main electrodes of the third switching element.

3. Circuit arrangement as claimed in claim 1, wherein the second inductive element comprises a transformer equipped with a primary winding that is coupled between the third switching element and an input terminal and a secondary winding coupled in series with the terminals for lamp connection.

4. Circuit arrangement as claimed in claim 1, wherein a part of the second inductive element is part of a filter comprised in the circuit arrangement.

5. Circuit arrangement as claimed in claim 1, wherein the first and second switching element either comprise a diode or are each shunted by a diode, wherein the DC-AC converter comprises a half bridge circuit and the first control circuit is equipped with means for alternatingly at a low frequency operating the circuit arrangement in a first and a second operating state, wherein in the first operating state the first switching element is rendered conductive and non-conductive at a high frequency while the second switching element is maintained in a non-conductive state, and wherein in the second operating state the second switching element is rendered conductive and non-conductive at a high frequency while the first switching element is maintained in a non-conductive state.

6. Circuit arrangement as claimed in claim 1, wherein the DC-AC-converter comprises a full bridge circuit equipped with a second series arrangement of a fourth and a fifth switching element that is coupled between the input terminals, wherein and equipped with means comprised in the first control circuit coupled to control electrodes of the fourth and fifth switching element, for controlling the conductive state of the fourth and fifth switching element, and wherein the first control circuit is equipped with means for alternatingly at a low frequency operating the circuit arrangement in a first or a second operating state, wherein in the first operating state one of the switching elements in each of the series arrangements is maintained non-conductive while of the two remaining switching elements one is maintained conductive and the other is rendered conductive and non-conductive at a high frequency, and wherein in the second operating state one of the switching elements that were non-conductive in the first state is maintained conductive while the other is rendered conductive and non-conductive at a high frequency and the other two switching elements are maintained non-conductive, and wherein the switching elements, that are in series with those switching elements that are operated at a high frequency in one of the operating states, either comprise a diode or are each shunted by a diode.

7. Circuit arrangement as claimed in claim 1, wherein the frequency of the AC ignition voltage is equal to f.

8. Circuit arrangement as claimed in claim 1, wherein the frequency of the AC ignition voltage is n * f, wherein n is a natural number bigger than or equal to 2.

9. Circuit arrangement as claimed in claim 1, wherein the amplitude of the AC ignition voltage is constant.

10. Circuit arrangement as claimed in claim 1, wherein the amplitude of the AC ignition voltage has a maximum value and is always bigger than half the maximum value.

11. Circuit arrangement as claimed in claim 1, wherein the second control circuit is preferably equipped with means for detecting the end of the take over phase of the high pressure discharge lamp.

12. Circuit arrangement according to claim 11, wherein the means for detecting the end of the take over of the high pressure discharge lamp comprise means for determining whether the lamp voltage has been higher than a predetermined value in a predetermined time interval.